MAR 1 6 2005

Mr. Chris Eustice
New Mexico Environment Department
Groundwater Quality Bureau
P.O. Box 26110
Santa Fe, New Mexico 87502-6110

Re: Human Health Risk Assessment Workplan for the Smelter/Tailing Soils Investigation Unit at the Chino Mines Superfund site

Dear Mr. Eustice:

Thank you for the opportunity to comment on the Human Health Risk Assessment Workplan for the Smelter/Tailing Soils Investigation Unit at the Chino Mines Superfund site. Listed below are our comments:

General Comments:

1- Exposure to lead should be evaluated separately, using the EPA IEUBK lead model. A separate section should be developed to evaluate risk from lead exposure.

2- The number of samples in each of the five exposure areas should be identified and checked for its adequacy in representing the respective area.

Specific Comments:

1- **Page 6 section 2.4.2.2**

The equation provided in that section is not suitable to evaluate the difference between on-site data and background data. The distribution of the two data sets should first be evaluated and then a statistical evaluation of the difference between the means of the on-site data and the background data should be done. Different statistical tests are available to test the hypothesis that the two data sets are different at a confidence level of 95%.

2- **Page 12 section 3.3.2 Air**

It was reported that a wind erosion model will be used to estimate inhalation of particulates in air.
Assuming that dust from traffic is copper-contaminated, are there unpaved roads in the vicinity, and is there a potential of particulate emission due to traffic? If there is, then it would be prudent to include emissions in the parameters to evaluate, due to traffic in addition to wind erosion.

3- **Page 13 section 3.3.5 Homegrown Vegetables**

It was reported that current residents do not have vegetable gardens. In evaluating the possibility the residents could have gardens in the future, it should be understood that plant uptake models taken from the literature might not represent site specific soil conditions. The Uncertainty Section in the risk assessment should address this high uncertainty risk evaluation.

4- **Page 13 Section 3.3.7 Locally-Raised Cattle**

Uptake of COPC from soil into beef or milk of locally raised cattle is suggested here. It was not clear if data on the concentrations of the COPC in grass or other grazed plants is available. We recognize the high uncertainty of models that evaluate uptake of COPC from soil into plant and then into grazed cattle. To reduce the uncertainty, you could consider collecting grass or grazed plants from areas of concern and analyze them for the COPC. However, it should be understood that with each plant sample collected, there should be co-located soil samples collected, to help correct the transfer coefficients that could be used for the whole site.

5- Page 16 last Paragraph

It was stated in the report "*In addition to data collected as part of the RI study, Gradient will also include data collected as part of the Background Report.*"
It was not clear however, if the background data will be considered as site data and included ~~in~~ with the general statistical analysis of site data. We recommend that background data and on-site data be separated at all times and not grouped in the calculations.

6- Page 18 section 3.5.2 Calculation of Exposure Point Concentrations in Air

It was reported that the air concentrations will be modeled based on one year of meteorological data. We suggest using five years of meteorological data for modeling a good cross section of meteorological conditions for the site of interest. We also suggest that you include the emissions of particulate calculations, and emissions from traffic on unpaved roads along with emissions from wind erosion.

7- Page 20 Sections 3.5.6 and 3.5.7

Please provide references for the transfer factors that will be used to evaluate uptake of COPC from soil into chicken, eggs, beef and milk.

8- Page 24 and 25

Please provide references for the intake equations used to calculate the intake from ingestion of home grown vegetables, ingestion of locally-raised chicken and eggs, and ingestion of locally raised cattle.

On a last note, we did not review the exposure factor parameters provided in the Appendix. We recommend that they be carefully reviewed to make sure they conform with acceptable EPA exposure default numbers or toxicity values.

Please let me know if you would like to discuss any comments in more detail. I may be reached at (214) 665-6686. Thank you.

Sincerely,

Petra Sanchez
Remedial Project Manager
US EPA Region 6

CC: Dr. Ghassan Khoury, Ph.D., EPA, Superfund Division, 6SF-LT

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